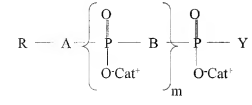
In the Claims

Claims 1-79 (Canceled).

Claim 80 (currently amended): A method of treating a solid tumor comprising the administration of a composition γδ T cell activator and a pharmaceutically acceptable carrier and a composition comprising interleukin-2 and a pharmaceutically acceptable carrier, said γδ T cell activator composition and said interleukin-2 composition being administered separately to a subject and said γδ T cell activator composition being administered as a single dose at the beginning of the treatment and said interleukin-2 polypeptide being administered at low doses and ~~comprising a pharmaceutically acceptable carrier in an amount sufficient to induce an at least 5-fold increase in the γδ T cell population in a subject having a solid tumor,~~ wherein said γδ T cell l activator is a compound of:

a) formula (I):



Formula (I)

wherein Cat+ represents at least one organic or mineral cation that can be the same or different;

m is an integer from 1 to 3;

B is O, NH, or any group capable of being hydrolyzed;

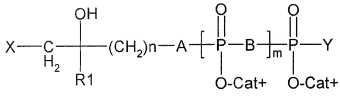
Y = O^-Cat^+; a C_1-C_3 alkyl group; -A-R; or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF_2 or CH_2; and,

R is a linear, branched, or cyclic, aromatic, non-aromatic, saturated or unsaturated C_1-C_{50} hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon

group comprises an alkyl, an alkylenyl, an alkynyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH_2), an amide (-$CONH_2$), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), a halogen, a halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof; or

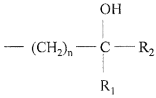
b) formula (II):



(II)

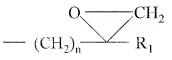
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R1 is a methyl or ethyl group, Cat+ represents at least one organic or mineral cation, n is an integer from 2 to 20, A is O, NH, CHF, CF_2 or CH_2, and Y is O$^-$Cat+, a nucleoside, or a radical –A-R, wherein R is selected from the group consisting of:

1)



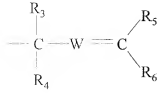
wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3)alkyl group, and R_2 is an halogenated (C_1-C_3)alkyl, a (C_1-C_3)alkoxy-(C_1-C_3)alkyl, an halogenated (C_2-C_3)acyl or a (C_1-C_3)alkoxy-(C_2-C_3)acyl;

2)



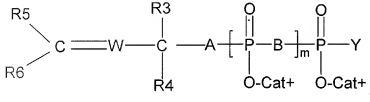
wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and

3)



wherein R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is –CH- or –N- and R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester; or

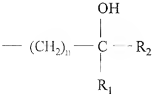
c) formula (XII):



(XII)

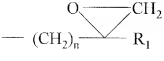
in which R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is –CH- or –N-, R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester, Cat+ represents at least one organic or mineral cation that can be the same or different, B is O or NH, m is an integer from 1 to 3, A is O, NH, CHF, CF_2 or CH_2, and Y is O⁻Cat+, a nucleoside, or a radical –A-R, wherein R is selected from the group consisting of:

1)



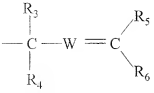
wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3)alkyl group, and R_2 is an halogenated (C_1-C_3)alkyl, a (C_1-C_3)alkoxy-(C_1-C_3)alkyl, an halogenated (C_2-C_3)acyl or a (C_1-C_3)alkoxy-(C_2-C_3)acyl;

2)



wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and

3)



wherein R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is CH or N, and R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester.

Claim 81 (Previously presented): The method according to claim 80, wherein said γδ T cell activator is provided in an amount sufficient to induce an at least 10-fold increase in the γδ T cell population in a subject.

Claim 82 (Previously presented): The method according to claim 80, wherein at least two treatments are administered to said subject.

Claim 83 (Previously presented): The method according to claim 80, wherein at least four treatments are administered to said subject.

Claim 84 (Previously presented): The method according to claim 80, wherein the γδ T cell activator is administered in more than one treatment with an interval of about two to about eight weeks between treatments.

Claim 85 (Previously presented): The method according to claim 80, wherein the γδ T cell activator is administered in more than one treatment with an interval of about three to about four weeks between treatments.

Claim 86 (Withdrawn): The method according to claim 80, wherein said γδ T cell activator is provided in an amount sufficient to expand the γδ T cell population in a subject to reach between 30-90% of total circulating lymphocytes in a subject.

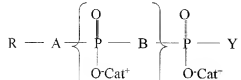
Claim 87 (Previously presented): The method according to claim 80, wherein the biological activity of γδ T cells is increased in said subject.

Claim 88 (Previously presented): The method according to claim 80, wherein the solid tumor is renal cancer.

Claim 89 (Withdrawn): The method according to claim 80, wherein said solid tumor is selected from the group consisting of a melanoma, ovarian cancer, colon cancer, lung cancer, pancreatic cancer, neuroblastoma, head or neck cancer, bladder cancer, breast cancer, brain cancer and gastric cancer.

Claim 90 (Previously presented): The method according to claim 80, wherein the γδ T cell activator is a composition comprising a compound capable of inducing the proliferation of a γδ T cell in a pure population of γδ T cell clones when said compound is present in culture at a concentration of less than 1 mM.

Claim 91 (Previously presented): The method according to claim 80, wherein the γδ T cell activator is a compound of formula (I):



Formula (I)

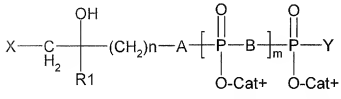
wherein Cat+ represents at least one organic or mineral cation that can be the same or different;
m is an integer from 1 to 3;
B is O, NH, or any group capable of being hydrolyzed;
Y = O⁻Cat+; a C_1-C_3 alkyl group; -A-R; or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a

tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;

A is O, NH, CHF, CF_2 or CH_2; and,

R is a linear, branched, or cyclic, aromatic, non-aromatic, saturated or unsaturated C_1-C_{50} hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, an alkynyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group ($-NH_2$), an amide ($-CONH_2$), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), a halogen, a halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof.

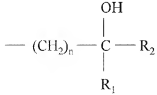
Claim 92 (Previously presented): The method according to claim 91, wherein the γδ T cell activator is a compound of formula (II):



(II)

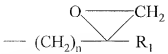
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R1 is a methyl or ethyl group, Cat+ represents at least one organic or mineral cation, n is an integer from 2 to 20, A is O, NH, CHF, CF_2 or CH_2, and Y is O⁻Cat+, a nucleoside, or a radical –A-R, wherein R is selected from the group consisting of:

1)



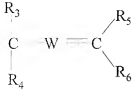
wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3)alkyl group, and R_2 is an halogenated (C_1-C_3)alkyl, a (C_1-C_3)alkoxy-(C_1-C_3)alkyl, an halogenated (C_2-C_3)acyl or a (C_1-C_3)alkoxy-(C_2-C_3)acyl;

2)



wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and

3)



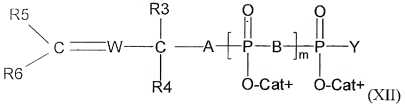
wherein R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is –CH- or –N- and R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester.

Claim 93 (Previously presented): The method according to claim 92, wherein the compound of formula (II) is (R, S)-3-(bromomethyl)-3-butanol-1-yl-diphosphate.

Claim 94 (Previously presented): The method according to claim 92, wherein the γδ T cell activator is administered in a dose to humans between 10 mg/kg to 100 mg/kg.

Claim 95 (previously presented): The method according to claim 92, wherein said γδ T cell activator is administered by intravenous infusion in a dose to humans that is calculated according to the formula (I): single dose (mg/kg)=(10 to 100) * N (I), where N is the number of weeks between treatments such that N is between about 3 and about 4.

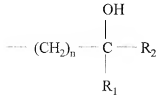
Claim 96 (Withdrawn): The method according to claim 91, wherein the γδ T cell activator is a compound of formula (XII):



(XII)

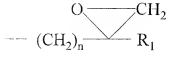
in which R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is –CH- or –N-, R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester, Cat+ represents at least one organic or mineral cation that can be the same or different, B is O or NH, m is an integer from 1 to 3, A is O, NH, CHF, CF_2 or CH_2, and Y is O$^-$Cat+, a nucleoside, or a radical –A-R, wherein R is selected from the group consisting of:

1)



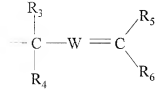
wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3)alkyl group, and R_2 is an halogenated (C_1-C_3)alkyl, a (C_1-C_3)alkoxy-(C_1-C_3)alkyl, an halogenated (C_2-C_3)acyl or a (C_1-C_3)alkoxy-(C_2-C_3)acyl;

2)



wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and

3)



wherein R_3, R_4, and R_5 are identical or different and are a hydrogen or (C_1-C_3)alkyl group, W is CH or N, and R_6 is an (C_2-C_3)acyl, an aldehyde, an (C_1-C_3)alcohol, or an (C_2-C_3)ester.

Claim 97 (Withdrawn): The method according to claim 96, wherein the compound of formula (XII) is (E)-4-hydroxy-3-methyl-2-butenyl pyrophosphate.

Claim 98 (Withdrawn): The method according to claim 96, wherein the compound of formula (XII) is (E)-5-hydroxy-4-methylpent-3-enyl pyrophosphonate.

Claim 99 (Withdrawn): The method according to claim 96 where said γδ T cell activator is administered by intravenous infusion in a dose to humans that is calculated according to the formula (I) single dose (mg/kg)=(0.01 to 20) * N (I) where N is the number of weeks between treatments such that N is between about 3 and about 4.

Claim 100 (canceled):

Claim 101 (Currently amended): The method according to ~~claim 100~~claim 80, wherein the interleukin-2 polypeptide is administered over a period of ~~time comprised~~ between 1 and 10 days.

Claim 102 (Previously presented). The method according to claim 80, wherein said γδ T cell activator is 3-(bromomethyl)-3-butanol-1-yl-diphosphate (BrHPP) and said solid cancer is renal cell carcinoma.

Claim 103 (Withdrawn). The method according to claim 80, wherein said γδ T cell activator is 3-(bromomethyl)-3-butanol-1-yl-triphosphate (BrHPPP).

Claim 104 (currently amended). The method according to ~~claim 100~~claim 80, wherein said IL-2 is administered subcutaneously, γδ T cell activator is 3-(bromomethyl)-3-butanol-1-yl-triphosphate (BrHPPP) and the BrHPP is administered intravenously.

Claim 105 (previously presented). The method according to claim 104, wherein said IL-2 is administered at a daily dose of between 0.2 and 2 MU per day.

Claim 106 (previously presented). The method according to claim 104, wherein said IL-2 is administered at a daily dose of between 0.2 and 1.5 MU per day.

Claim 107 (previously presented). The method according to claim 104, wherein said IL-2 is administered at a daily dose of between 0.2 and 1 MU per day.

Claim 108 (new). The method according to claim 80, wherein said IL-2 is administered at a daily dose of between 0.2 and 2 MU per day.

Claim 109 (new). The method according to claim 80, wherein said IL-2 is administered at a daily dose of between 0.2 and 1.5 MU per day.

Claim 110 (new). The method according to claim 80, wherein said IL-2 is administered at a daily dose of between 0.2 and 1 MU per day.